R/DWC Growplan by SKX-RDWC Rev.01

Der Plan setzt auf eine schrittweise Erhöhung der Nährstoffkonzentration, beginnend mit einem niedrigen EC-Wert von 0,2 mS/cm in den frühen Phasen bis hin zu 1,5–1,6 mS/cm in den späten Blütewochen. Diese Anpassung ermöglicht eine präzise Steuerung der Nährstoffzufuhr und ist besonders für Vollentsalztes (RO)-Wasser geeignet.

1. **DWC-Systems:** DWC systems require **30–70% higher EC levels** compared to RDWC setups. Adjust dosing accordingly: Start with +30% and increase in 20% steps (50%, 70%, 90%) if deficiency symptoms appear.

2. **EC-Readings:** Measured EC values may fluctuate by up to two decimal points. For example, a target value of 0.8 mS in Veg Week 4 may read as 0.86 mS on your meter.

3. **RO-Water:** This Athena-based plan is exclusively designed for **RO, distilled, or demineralized water** with an initial EC of 0.0 mS/cm.

4. **CalMag Fertilization:** Athena nutrients are formulated with **CalMag integration in mind**, delivering a well-balanced profile for healthy plant development.Generally, **no foliar feeding is necessary** if applied correctly. However, **supplemental use is optional** if signs of deficiency occur.

5. **CalMag Foliar Spray:** Mix at 0.5 ml/L and spray every 2–3 days, both on top and underneath the leaves**. In case of visible deficiency**, increase to 1.0 ml/L and spray once daily, 1 hour before lights-on, for 3 days. **Avoid overuse from Week 6 of flowering onward and always monitor humidity levels.**

6. **pH-Management**
   Maintain a pH range of **5.8 to 6.2**, which is ideal for nutrient uptake in RDWC systems. Plants release signaling compounds to slightly influence their rhizosphere, but this is not enough to regulate the system-wide pH. As long as the pH stays within the optimal range, no correction is needed. Adjust only if it drifts below 5.5 or above 6.5.
7. **Weekly Water Changes Are a Must**
   Regular **weekly reservoir changes** are essential to prevent **antagonisms** and nutrient lockouts. They help reset EC levels and avoid salt buildup, ensuring consistent nutrient uptake and preventing toxicity.
8. **Manual Addback After Daily Uptake**
   Measure and top up nutrient solution after lights go off:
   a. If EC is higher than the previous day → **reduce EC** in your addback (-0.1 EC)
   b. If EC is lower than the previous day → **increase EC** in your addback (+0.1 EC)
9. **Strain-Specific Requirements**
   The plan includes EC adjustment recommendations based on genetic profiles:
   a. **Sativa-dominant strains:** Lower nutrient demand, prefer EC between 1.0–1.4 mS/cm (especially in bloom).
   b. **Indica-dominant strains:** Higher nutrient demand, tolerate EC of 1.4–1.8 mS/cm for dense bud development.
   c. **Haze/Hybrid strains:** Moderate demand, ideal EC of 1.2–1.6 mS/cm depending on dominance.
10. **CO_2 & Light Intensity (PPFD)**
    This plan supports **elevated CO_2 levels during flowering**, targeting 1,200–1,400 ppm to maximize growth potential. Light intensity is increased to 1000–1200 µmol/m^2/s and matched to CO_2 input for optimal photosynthesis. **Use CO_2 above 1000 ppm only at temps between 26–30 °C** to achieve ideal results. This plan supports **elevated CO_2 levels during flowering**, targeting 1,200–1,400 ppm to maximize growth potential. Light intensity is increased to 1000–1200 µmol/m^2/s and matched to CO_2 input for optimal photosynthesis. **Use CO_2 above 1000 ppm only at temps between 26–30 °C** to achieve ideal results.

11. **Light Intensity (PPFD)**
    PPFD targets are aligned with CO_2 supplementation and serve as general guidelines. Adjust based on strain response.
    a. Without CO_2, do **not exceed 800–900 PPFD** to avoid light stress.
    b. Keep a **minimum distance of 30 cm** between light and canopy.
    c. If signs of light stress appear, reduce PPFD in 50-step increments and observe.
    d. If plants remain healthy, you may also **increase PPFD in 50-step increments** to boost nutrient (EC) uptake.

12. **Flush:** Flush for **4–10 days**, depending on trichome maturity (20–25%) and stigma color (75%).

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ATHENA BLENDED Mixing order	Root	1	2	3	4	1	2	3	4	5	6	7	8	ml/ 10L
RO-Water	0.0mS EC													
Grow/Flower B+A	1,7 + 1,75	2.75 + 2.75	3.8 + 3.8	6 + 6	8 + 8	9 + 9	11,5 + 11,5	13 + 13	14,5 + 14,5	16 + 16	15.5 + 15.5	11.5 + 11.5	10 + 10	Fade
PK 13/14								6.5	10	13	23	28	24	
CalMag	2.2	3.5	4.8	7.5	10	7.5	9	8	10	6.5	5	1.25	0	
Cleanse	10	11	12	13	20	20	20	20	20	20	20	20	20	20
Balance (pH Plus)	Beim ersten mal, als letzte Komponente dazu mischen bis pH erreicht ist, notiert den Wert und nutzt dies dann für die nächste NSL als erstes. Zum Schluss nochmal messen und Nachjustieren.													
EC (mS/cm)	0.2	0.3	0.4	0.6	0.8	0.8	1.0	1.2	1.4	1.5	1.6	1.4	1.1	0.4
ORP (mV)	-	300-400			400-450									500
pH	6.2	6.2	6.1	6.0	6.0	6.0	6.0	6.0	5.9	5.9	5.8	5.8	5.8	5.6
Light Schedule Day / Night	20/4 h	18h / 6 h				12h / 12h							11h /13h	10h / 14h
VPD (kPa)	0.4	0.4-0.6	0.5-0.7	0.7-0.9	1.0	1.0-1.2	1.0-1.2	1.2-14	1.2-1.4	1.4	1.4	1.4	1.6	1.6
Temp. / RH	30° / 90%	25° / 85%	25° / 80%	25° / 75%	25° / 70%	25° / 65%	25° / 65%	25° / 65%	25° / 60%	25° / 55%	23° / 50%	20° / <40%	18° / <35%	16° / <30%
CO_2 (ppm)	-	400-600				600-800	800 -1K	1K-1.2K	1.2K-1.4K	1.2K-1.4K	1.2K-1.4K	1K – 1.2K	800-1K	400-600
PPFD (µmol/m²/s)	200	300	400	500	600	800	900	1000	1k - 1.2k	1k - 1.2k	1k - 1.2k	1k - 1.2k	500	500
Water Temp. Day / Night	22°	20°	20°	20°	20°	20°	20°	20°	20° / 18°	20° / 17°	19° / 16°	18° / 16°	17° / 15°	15°
Water Change	1x	1x	1x	1x	1x	1x	1x	1x	1x	1x	1x	1x	1x	1x
Daily Consumption & Addback per m²	<500mL	1L		2L		3-4L			5-7L				>5L	0L Addback